Serial Number: 10/734,324 Filing Date: December 12, 2003

Title: ESTABLISHING OPTIMAL LATENCY IN STREAMING DATA APPLICATIONS THAT USE DATA PACKETS

Assignee: Intel Corporation

REMARKS

This reply responds to the Office Action mailed on March 18, 2008.

Claims 1, 12, 19, and 33 are amended, no claims are canceled, and no claims are added; as a result, claims 1-41 are now pending in this application. The amendments to the claims are fully supported by the specification as originally filed. No new matter is introduced. Applicant respectfully requests reconsideration of the above-identified application in view of the amendments above and the remarks that follow.

Independent claims 1, 12, 19, and 33 are amended to further clarify these claims.

First §103 Rejection of the Claims

Claims 1-2, 4-13, 15-24, 26-28, 30-38, and 40-41 were rejected under 35 USC § 103(a) as being unpatentable over Graf (U.S. Patent 6,085,221) in view of Craft (U.S. Patent 6,272,566 B1). Applicant traverses these grounds of rejection of these claims.

Applicant reserves the right to swear behind Graf and Craft at a later date.

Applicant cannot find in the combination of Graf and Craft, as proffered in the Office Action, a disclosure or a suggestion of a system having an under-run forecasting mechanism, a statistics monitoring mechanism, and a playback queuing mechanism that are co-located to generate an under-run predicted time, to measure fluctuations in arrival of data packets, and to build latency based on received data packets from a network at the co-location, as recited in amended claim 1. Graf relates to apparatus and methods for providing appropriate delays for playing video or audio by determining the delays prior to transmission of a file and providing the delay information with the transmitted data files. (See Graf column 4, line 17-59.) As shown in Graf's Figure 5, the delay information is generated in a video server and provided to a client, where the client is separate from the video server by a network. Thus, the delay information is not generated at the client. In the Office Action, it is stated that "Craft discloses including services in a device separate from the server itself (Fig. 1, items 104 and 110; col. 2, ln. 57-59)." As shown in Craft's Figure 1, items 104 and 110, like Graf, operate at a source separated from a video decoder by a network or a transmission medium. Graf and the combination of Graf and Craft, as proffered in the Office Action, deal with determination of delays for data transmitted through a network based on the apparatus and its functionality at the source of transmitting the

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data onto a network. In contrast, claim 1 relates to under-run forecasting mechanism, a statistics monitoring mechanism, and a playback queuing mechanism that are co-located to generate an under-run predicted time, to measure fluctuations in arrival of data packets, and to build latency are based on received data packets from a network.

Graf's Figure 4 and column 6, lines 44 - column 7, line 25 discusses how a receiver can impose constraints on output traffic to the receiver, where the constraints are used by a video server at presentation time (See Graf column 6, line 35-43) from a pre-stored source such as a table. In Graf's Figure 4, the amount of traffic transmitted is shown as a function of time, "which is--under the assumptions made in the model of FIG. 1--equal to the total amount of traffic received up to time t, is plotted over t." (See Graf column 6, line 45-49), where "[t]his traffic curve only depends on the 'receiver buffer overflow' curve, as the rate control always tries to keep the receiver buffer full. To be able to construct the curve it is necessary to assume in a first step that the receiver buffer is already completely filled at initialization." (See Graf column 6, line 63-67.) Thus, Applicant submits that the curves of Graf's Figure 4 are constructed and that Graf does not disclose, teach, or suggest a statistics monitoring mechanism to measure fluctuations in arrival of data packets, from the network, to the supply of received data packets. Craft does not cure the deficiencies of citing Graf with respect to claim 1.

For at least the reasons stated above, Applicant submits that claim 1 is patentable over Graf in view of Craft. For at least the reasons stated above with respect to claim 1, Applicant submits that independent claims 12, 19, and 33 are patentable over Graf in view of Craft. Further, in view of the additional features of each of these independent claims, Applicant respectfully submits that these claims may be allowable for one or more reasons in addition to and/or in alternative to those reasons identified above. Claims 2 and 4-11, claims 13 and 15-18, claims 20-24, 26-28, and 30-32, and claims 34-38, 40, and 41 depend from claims 1, 12, 19, and 33, respectively, and are patentable over Graf in view of Craft for at least the reasons stated herein. Further, in view of the additional features of each of these dependent claims, Applicant respectfully submits that these claims may be allowable for one or more reasons in addition to and/or in alternative to those reasons identified above.

Applicant respectfully requests withdrawal of these rejections of claims 1-2, 4-13, 15-24, 26-28, 30-38, and 40-41, and reconsideration and allowance of these claims.

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Second §103 Rejection of the Claims

Claims 3, 14, 29, and 39 were rejected under 35 USC § 103(a) as being unpatentable over Graf (U.S. Patent 6,085,221) as applied to claims 1, 12, 19 and 33 above, further in view of Rostoker et al. (U.S. Patent 5,784,572). Applicant traverses these grounds of rejection of these claims.

Applicant submits that combining Rostoker et al. (hereafter Rostoker) with Graf and Craft, as proffered in the Office Action, does not cure the deficiencies of citing Graf in view of Craft with respect to claim 1. Therefore, for at least the reasons stated above with respect to claim 1, Applicant submits that Graf in view of Craft further in view of Rostoker does not disclose or suggest all the features of claim 1 and that claim 1 is patentable over Graf in view of Craft further in view of Rostoker.

For at least reasons similar to those stated herein, Applicant submits that independent claims 12, 19, and 33 are patentable over Graf in view of Craft further in view of Rostoker. Further, in view of the additional features of each of these independent claims, Applicant respectfully submits that these claims may be allowable for one or more reasons in addition to and/or in alternative to those reasons identified above. Claims 3, claim 14, claim 29, and claim 39 depend from claims 1, 12, 19, and 33, respectively, and are patentable over Graf in view of Craft further in view of Rostoker for at least the reasons stated herein. Further, in view of the additional features of each of these dependent claims, Applicant respectfully submits that these claims may be allowable for one or more reasons in addition to and/or in alternative to those reasons identified above.

Applicant respectfully requests withdrawal of these rejections of claims 3, 14, 29, and 39, and reconsideration and allowance of these claims.

Third §103 Rejection of the Claims

Claim 25 was rejected under 35 USC § 103(a) as being unpatentable over Graf (U.S. Patent 6,085,221) as applied to claim 19 above, in view of Craft (U.S. Patent 6,272,566 B1). Applicant traverses these grounds of rejection of this claim.

Claim 25 depends from independent claim 19. Applicant submits that claim 25 is patentable over Graf in view of Craft for at least the reasons stated above with respect to claim

AMENDMENT UNDER 37 C.F.R. 1.116 - EXPEDITED PROCEDURE

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19. Further, in view of the additional features of this dependent claim, Applicant respectfully submits that this claims may be allowable for one or more reasons in addition to and/or in alternative to those reasons identified above.

Applicant respectfully requests withdrawal of these rejections of claim 25, and reconsideration and allowance of this claim.

CONCLUSION

Applicants respectfully submit that the claims are in condition for allowance and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicants' attorney at (612) 371-2157 to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

Respectfully submitted,

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Date 19 May 2008

David R. Cochran Reg. No. 46,632

CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being filed using the USPTO's electronic filing system EFS-Web, and is addressed to: Mail Stop AF, Commissioner for Patents, P.O. Box 1450, Alexendria, VA 22313-1450 on this

19 +h day of May 2008.

Signature

Name